



UHLER CINE PRINTER

The Cine printer makes copies of your film, for either the 8 or 16 mm, in color or black and white. It is easy to operate, no previous experience is necessary. Printing and processing instructions are sent with the machine. Prints of your favorite films can be made at approximately one-quarter of the cost of the original, and can be fun to make at home. You can take pictures with your camera, develop them, then make the prints from the negative and show them the same day. Reversal prints may also be made from positive film. Titles may be made with double exposed motion background as shown in theatres.

The printers are all A.C. operated, no batteries are required. The lamps are 6-8 volts. A meter shows the amount of voltage used on the picture printing lamps. Facilities are provided for filters to print color film. Capacity of 400 feet of film on both feed and take-up arms. There are many improvements over our previous models.

The sound and picture may be printed at the same time or separately. The lights for the sound and picture are controlled by two rheostats with 10 light densities. The films are run through the printer by a precision sprocket. Sharp and exact prints are made without slipping or weaving, due to the fact that the aperture and pressure plates are so constructed. Scratching is eliminated since the picture and sound track areas are relieved. A ruby viewing window shows the film while it is running through. The machine is cast aluminum construction with chrome plated and polished parts. Reels are not furnished.

SPECIFICATIONS

Prints:	8 and 16mm color or black and white
Capacity:	400 feet feed and take-up arms.
Speed:	100 feet in 5 minutes
Light Controls:	Rheostat with 10 light densities.
Printing Lamps:	6-8 volts for picture and sound.
Film Guides:	Precision sprocket, Roller, aperture, and pressure plates relieved at picture and sound track areas, chrome plated and polished.
Voltage:	All A.C., 110 volts 60 cycle. No batteries required.
Voltmeter:	1-10 volts showing voltage used on picture printing lamps.
Operation:	Instructions for printing, film processing, and chemical formulas are sent with the machines.
Construction:	Cast aluminum.
Finish:	Baked wrinkle enamel.
Weight:	11 lbs. net, 15 gross.

GUARANTEE

The printers are tested and guaranteed. They are built sturdy for long and lasting operation.

Price \$225.00 F.O.B. DETROIT



15762 WYOMING AVE.

DETROIT, MICHIGAN 48238

Phone: UNiversity 1-4663

Cable Address: UHLCIMA

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MZE



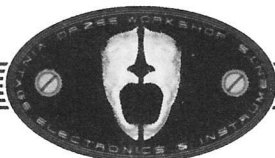
Buyer
Michael Carter
michael.studiocarter@gmail.com
14129734316

Shipping address - confirmed
Michael Carter
1207 East End Avenue
Pittsburgh, PA 15218
United States

Description	Unit price	Qty	Amount
Vintage TUNG-SOL No. 55 (TS55) Lamp Item# 001933	\$2.99 USD	4	\$11.96 USD



Subtotal	\$11.96 USD
Shipping and handling	\$4.99 USD
Total	\$16.95 USD



Dr. ZEE WORKSHOP VINTAGE and CUSTOM ELECTRONICS and MUSICAL INSTRUMENTS

CINE 16MM PRINTER
OPERATING INSTRUCTIONS
THREADING PRINTER

It is necessary to remove the 16mm aperture plate and replace it with the 8mm. The sprocket must be reversed so that the teeth section is inward or toward the printer. This will then print the single or double 8mm film. In order to print the double 8mm film, print the one-half side and then reverse the film and run the other side and print.

TO THREAD FILM FOR 8MM PRINTING.

Place the negative or 8mm film to be copied on the lower left feed arm and run over the top of the small roller at the far left side of the printer, under the large roller, into the printing gate, under the sprocket, (make sure that the gate is properly closed and the sprocket roller locked in place), then to the lower right take-up.

The positive film is placed on the upper left feed arm and run together with the negative (emulsion to emulsion), over the top of the small roller at the far left of the printer, under the large roller, into the printing gate, under the sprocket and up to the right top take-up.

For exposure using the rheostat control for the different light densities, color film printing, processing and other information, please refer to the 16MM Operating Instructions.

Eastman Type 7302 Fine Grain film may be used for positive prints for 8mm (8 or 16mm double perforated). If faster film is required, Eastman No. 7305 Positive is recommended.

Film may be purchased from:
Superior Bulk Film Co., 442 No. Wells Street
Chicago 10, Illinois.

W.J. German, Inc., 6040 No. Pulaski Road,
Chicago 30, Illinois.

Place the reel of raw stock (positive film) on the upper left arm and the reel of negative to be copied on the lower left arm. Put both the negative and the positive film under roller, place on printing aperture plate and lock gate. Run the films on the bottom side of the sprocket and locked into place with roller there. Make sure both the films are engaged on the sprocket teeth and now they are ready to be fastened to the take-up reels. The positive film is placed on the upper right take-up and the negative on the lower right take-up shaft.

The dial on the left is to set the light density when printing the sound track. This is set to the desired light density required for the printing and is not changed while printing the sound track.

The right dial is to set the light density when printing the picture and this can be changed while printing if the scenes are too light or too dark to make the necessary correction on an over or under exposed negative. The meter reading will give you an idea of the amount of light required for printing. We suggest the idea to make a short test strip by printing an average exposed negative starting with the weakest light and then develop at the normal developing time at 68° and then these strips can be placed on a glass. Each one should be marked with the light number it was printed on. A comparison then can be made with the negative which is to be printed and in this way it can be determined which is the proper light density to be used to get a good exposure when printing the positive film.

To print color film - the right rheostat knob is turned on full in order to get the proper light color value.

The printer is threaded and operated in the same manner except, in order to correct color density, filter should be used for the particular color.

ARMS ASSEMBLED TO PRINTER

Fasten the take-up arm on the right hand side of the machine. Next open up the gate and put the large spring on the pulley next to machine or the inside pulley on the sprocket shaft and place on small rollers and then on to the top take-up pulley.

The smaller belt is placed on the same way and then on to the lower take-up pulley on the arm.

REVERSAL FILM PROCESSING

All processing must be done in a dark room. Use a red (orchochromatic) safelight, or green light for panchromatic film. Process the film in a Morse Developing Tank or wind it on the developing rack with the emulsion or dull side away from the rack (otherwise there will be rack marks on the film.) Make sure the chemicals are used in their proper order and that they do not get mixed in handling the film or otherwise.

Before beginning to process the film, it is a good practice to test a short strip of exposed film in each of the solutions in order to determine whether or not they are working properly and are not exhausted. If the developer is warmer than 68° degrees, the developing time becomes shorter. If temperature is colder, a longer time will be required for developing. Approximately 3/4 minute add or subtract for each degree.

DEVELOPING TIME - FIRST DEVELOPER.

For Orthochromatic film, 3 to 5 minutes at 68°, panchromatic - 5 to 7 minutes, fast panchromatic 7 to 9 minutes at 68° degrees.

OPERATION 1.

Mix developer and keep as near to 68° as possible. If the exposures are fairly good, with the reel constantly revolving the above timing should be correct. At the end of this time, the film should appear black. Necessary time and temperature are the controlling factors in the reversal process.

WASH FILM.

A 3 minute wash after the first developer is sufficient to both, stop the action of the developer and to remove the developer from the film.

OPERATION 2. BLEACH.

Rotate the reel containing the film in the bleach bath for 5 to 7 minutes. The action here will remove everything which was developed in the first developer. Do not allow temperature to rise above 70° degrees. After the film has been bleached for 3 minutes, a normal house light may be turned on and the balance of the reversal process may be finished with the light on.

WASH

Drain the bleach from your tanks and wash the film for 3 to 5 minutes in running water.

OPERATION 3. CLEAR.

The film should be immersed in the clear bath 5 to 6 minutes. This solution should remove the yellow stain left by the bleach.

REVERSAL FILM PROCESS.

Wash - Drain the clear solution from the developing tank and wash in running water for 3 minutes.

OPERATION 4. FLASHING.

Use a #1 Photo Flood light in a reflector at about 3" from the reel for 1 minute to flash. At this operation, unexposed emulsion remains on your film which must be exposed to light as above before re-developing it.

OPERATION 5. SECOND DEVELOPMENT.

Pour second developer into the tank and rotate the reel for approximately 5 minutes. It is impossible to over develop. Keep temperature below 70°.

WASH - Drain the second developer from tank and wash for 3 minutes.

OPERATION 6. FIXER AND HARDENER.

Pour fixer and Hardener solution into the tank and rotate the reel for 7 to 10 minutes. This solution should harden the film and make it impervious to scratches. The time in this solution is not critical. Merely make sure that the temperature does not rise above 70 degrees.

WASH - After draining the fixer and hardener from the tank, the film should be washed vigorously for approximately 10 minutes in running water, if possible. If it is not possible to wash in running water, change the water every 2-1/2 minutes.

DRYING - After the film has been washed, remove one end of the film from the developing reel and attach it to the drying rack. Wind the film on to the drying rack while sponging or chamoising it carefully to make sure no spots will appear on your dried film. A fan may be used to assist your hastening drying. After the film is dried, it may be removed from the drying rack and projected.

(After the final wash. A few drops of Kwik Wet will insure even and spot-free drying.)

FORMULA FOR REVERSAL SOLUTIONS

FIRST DEVELOPER

Metol 29 grains
Sodium Sulfite 1 oz. 290 gr.
Hydroquinone 117 grains
Sodium Carbonate 1 oz. 290 gr.
Potassium Thiocyanate 58 grains
Potassium Bromide 58 grains
Water to make 32 oz.

BLEACH

Potassium Bichromate. 75 grains
Sulphuric Acid (C.P.) 2/3 oz.
Water to make 32 oz.

(CAUTION: Always pour the acid into the water.)

CLEARING SOLUTION

Sodium Sulphite (Dessicated) . . . 1-1/4 oz.
Sodium Bi-Sulphite 1 oz.
Water to make 32 oz.

SECOND DEVELOPER

Metol 12 grains
Sodium Sulphite. 1-1/4 oz. 40 gr.
Hydroquinone. 1/4 oz. 10 gr.
Sodium Carbonate 1-3/4 oz.
Potassium Bromide 75 grains
Water to make 32 oz.

FIXER AND HARDENER

Hypo 8 oz.
Sodium Sulphite 1 oz.
Acetic Acid* 28% 1-1/2 fl. oz.
Boric Acid 1/4 oz.
Potassium Alum 1/2 oz.
Water to make 32 oz.

* To get 28% Acetic Acid from Glacial Acetic,
mix 3 parts acid to 8 parts water.

CHEMICAL LIFE

1/2 gallon will process approximately 300 ft. of 16mm film or equivalent. After 100 feet has been developed, developing time should be increased slightly for each additional 100 feet.

FORMULA FOR CONTRASTY TITLES

For punchy, contrasty titles, the following formula is recommended:

Metol 15 grains
Sodium Sulfite 2-1/2 oz.
Hydroquinone 130 grains
Sodium Carbonate 1 oz.
Potassium Bromide. 75 grains
Water 32 oz.

Dissolve chemicals in order given-develop 4 minutes @ 68 degrees. Wash for 5 minutes. Fix in hypo hardening bath and wash for 10 minutes in running water. Sponge and dry.

CAUSES AND AFFECTS

1. A "snowy appearance" is due to dust or reticulation of the film. When dried in a dusty room and dust accumulates on the wet film, a "snowy" effect will be apparent upon projection. If film is washed at a higher or lower temperature than the developing solution, the contraction and expansion of the film will result in a minute breaking of the emulsion and upon projection the film will appear to have a "snowy" effect.
2. Too high temperatures will cause the emulsion to run. The images will appear wavy and irregular upon projection.
3. Film that is underexposed is black and dense and will appear dark when projected. Be sure to allow full development if you know the film may be underexposed. Weak solutions or solutions less than 65 degrees may result in a heavy, dark roll. Be sure the projection lamp is the correct wattage. Many times properly exposed and developed film will give poor projection due to a small wattage projection bulb.
4. Overexposed film is too light and appears to be thin and transparent. Allow less time in the first development if the film is known to be overexposed. Developing solutions which are too warm may also result in a light image.
5. A small colored Christmas tree light for a safelight is one of the common causes of fogged films. Only a photographic safelight can be used when working with film. These safelights are made of colored glass. Christmas tree lights are made of white glass which has been coated with color and has tiny pin holes through which the white light seeps and fogs the film. Safelights used too close to the film may also cause fogging.
6. Old or improperly mixed bleach or not sufficient time in the clearing bath will cause a brownish tinge.
7. Clear spaces every few inches is caused by film wound emulsion side down on the reel. The glossy side of film must be toward the rack.
8. Insufficient light or time in flashing or shadows thrown on parts of the film while flashing will result in uneven light and dark sections.
9. Usually water spots cause small circles on film when projected. Water droplets should be removed carefully with chamois or viscose sponge before drying.
10. Emulsion coming in contact with hands. Fingers or other objects while wet causes marks and uneven clear spots on film. Emulsion is soft and easily damaged while wet. Handle film as little as possible and always by the edge.

NEGATIVE PROCESSING

In negative processing. Only the following steps are required:

- (1) First Developer.
- (2) Wash
- (3) Fixer and Hardener
- (4) Wash
- (5) Sponge and Dry.

Negative Development is required when making titles or when developing negative film. Negative processing is also required when a print from a negative has been made on positive film. The developing time required is dependent upon the type of film used. Orthochromatic film and positive film require approximately 3 to 5 minutes developing time. Panchromatic emulsions require approximately 5 to 7 minutes of developing time. High-contrast panchromatic emulsions require 7 to 9 minutes of developing time. Although special formulae may be used for negative processing, satisfactory results are obtainable by using the first developer of your set of Cine chems.

POSITIVE FILM PROCESSING

1. Develop positive film for about 5 minutes at 68 degrees.
2. Wash film for about 3 minutes to remove the developer from the film.
3. Next put the film into the fixer and hardener solution.

POSITIVE FIXING SOLUTION.

SOLUTION No. 1	Water 64 oz.	Hypo 16 oz.
SOLUTION No. 2	Water about 125 degrees.	5 oz.
	Sodium Sulphite - Dessicated	1 oz.
	Acetic Acid - 28% pure.	3 oz.
	Potassium Alum	1 oz.

Dissolve chemicals in order given. Pour solution No. 2 into Solution No. 1 stirring solution No. 1 rapidly.

For those who do not care to mix their own chemicals, the Eastman Developer D-16 and the Kodak Fixing Solution may be purchased at a camera store.

POSITIVE FILM DEVELOPERS

It is safe to use a photographic ruby lamp when making prints on positive film. Keep developer, while processing, as near to 68° as possible.

Eastman Positive Developer D-16

Water about 125 degrees	96 oz.
Kodak Elon	18 grains
Kodak Sodium Sulfite Des.	5 oz.
Kodak Hydrochinon	350 grains
" Sodium Carbonate Mon.	3 oz.
" Potassium Bromide	50 grains
" Citric Acid	40 "
" Sodium Bisulphite	80 "
Cold water to make	1 gallon

DuPont Positive Film Developer 123-D

Water	1 gal.
Metol or Elon	32 grains
Sodium Sulfite Anhyd.	5 oz.
Hydrochinon	308 grains
Sodium Carbonate Monhyd	1 oz. 282 grains
Potassium Bromide	60 grains

PARTS LIST & PRICES:

No.	NAME	PRICE
1.	Mechanism Housing	\$15.00
2.	Face Plate	17.50
3.	Right take-up arm	5.00
4.	Left take-up arm	5.00
5.	Lamp-Housing	10.25
6.	Base	20.00
7.	Voltage Meter	7.35
8.	2-Dials	.25
9.	2-Knobs	.15
10.	2-Spring Rollers	.35
11.	2-Take-up Springs	.45
12.	Film Guide Roller	.75
13.	Gate	3.50
14.	Lock & Spring	.45
15.	Pressure Plate	5.50
16.	Film Guide	2.35
17.	Sprocket 10 T.	2.75
18.	Aperture Plate	2.85
19.	Sprocket Roller	.55
20.	Knob and Shaft Lock	.58
21.	Name Plate	.85
22.	2-Switches	.50
23.	Bottom Plate	.75
24.	Electric Cord & Plug	.45
25.	4 Shafts - feed & take-up	2.25
26.	6 Shaft Collars	.20
27.	2 Single Pulleys	1.95
28.	Double Pulley	2.95
29.	2 Feed Tension Springs	.15
30.	2-Rheostats	1.65
31.	Motor	3.25
32.	Drive Gears	1.25
33.	Large Gear 2"	2.20
34.	Idler Gear Set	2.90
35.	2 Light Sockets	.55
36.	2 Light Bulbs (#44 G. E.)	.15
37.	2 Light Brackets	.15
38.	Meter Bracket	.30
39.	"Oilite" Bearings	.40
40.	Bronze Bushings	.25
41.	Shafts	.50
42.	Voltage Transformer	3.00
43.	Screws	.05